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The Nature of Social Reality

by Torgny T. Segerstedt

1. Introduction.

Sociologists are often accused of making use of a naive and unnecessary formation of concepts to explain truisms. Naturally sociology, like all sciences, has its conceptual eccentricities. On the other hand it must be borne in mind that all sciences use special expressions and special concepts. The difficulty for sociology lies in the fact that it often employs everyday words to explain a number of relatively everyday phenomena, and that, in order to do so, it seeks to give the words of everyday language a definite, restricted, and precise meaning. But in this endeavour to attain precision everybody considers himself competent to sit in judgement on the sociologists. For instance, everybody believes he knows the meaning of the word "group" and is thus able to criticize a sociologists way of using it. The same pretentions do not exist when it is a question of concepts used in physics and chemistry. Even the words used in physical science have, in many cases, corresponding terms in everyday language, but the man in the street has accepted that the words of the physicists have their own special meanings.

As a matter of fact, not everything is well-ordered within sociology (or within the social sciences altogether). But the shortcomings are not exactly those indicated by the critics. Sociology has a good deal of knowledge summing up social facts, it has a well developed technique of measurement, but its shortcoming is, in my opinion, the absence of *coherence* in sociological knowledge, a shortcoming which in my opinion is due to the fact that sociology has not any *comprehensive, basic* sociological theory. New knowledge is not fitted into a system of knowledge, new facts do not fill up some white spots in a map, because we have not any map showing the outlines. It is the shortcoming of the basic theory that results in the aptitude for making concepts *ad hoc*. In so far the criticism of the language used by sociology may be justified. As things are, certain sociologists have no theory at all, but report their observations more or less uncritically. Others make attempt to fit their observations into self-made concepts, fragment of theories

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and terms. Or perhaps I should add: fragments of theories and terms which they resign themselves to consider adapted only for their investigations. The question I shall ask is as follows: — *Is it really a question of isolated fragments of theories and selfmade concepts and terms, or is the isolation only an illusion, a mistake due to shortcomings in theoretical knowledge and analysis of concepts?* After all, must not all sociologists (and in the last resort all social scientists), when speaking about a social reality, have some hypotheses in common about the nature of that reality, even when they use their own concepts? And as all social scientists speak about something real or about reality, must they not presuppose certain hypotheses about reality? If we say, e. g., that as industrialisation increases and the population becomes more urban, the birth rate decreases and the divorce rate increases, the meaning is that *reality has such a nature that* when industrialisation increases and the population grows more urban, the birth rate decreases etc. Thus not only a social reality is presupposed, but in addition certain hypotheses concerning its nature and structure are made. The sociologist wants to impart these hypotheses and observations to other sociologists; in so doing he presupposes a common vocabulary, viz. that certain words have an accepted common meaning.

Thus my opinion is that all sociologists must work with a hypothesis about a social reality, even if they openly refuse to do so. The aim of the present paper is to attempt to demonstrate that this is really the case, i. e. that in our judgement we presuppose both a social reality and a common vocabulary about that reality. But in addition I want to demonstrate that we not only suppose that social reality *does* exist, but also make certain hypotheses about its *nature*.

2. *Theory and Data in Sociology.*

Many sociologists would undoubtedly raise the following objections to my points of view: It is obvious that we look upon the social facts we report as real. But that does not mean that we make any hypothesis about the nature of social reality. The phenomena observed exhibit many common features admitting of a certain cautious generalization. But at the starting-point of our investigations we do not speak about the reality *per se*.

It seems that there may be something in this cautious every day attitude of sociologists. It implies, in fact, a certain resignation: we shall never attain to such a coherent system of knowledge as physics, chemistry or zoology have succeeded in establishing. The fate of sociology will probably be never to attain to one coherent field of knowledge.

This paper turns against such a conception.

But then, what are the data of sociology? The starting-point is generally more or less everyday observations of people's behaviour. We notice that the interaction of certain people with each other is more lively than with others, that some people

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react or act in the same way in the same situation, and two or three strive to reach or realize certain aims by common efforts. Examples of these relations are the phenomena called *sets* or *set events* by Chapple and Coon. "When, for example, we watch a regiment drilling, we see hundreds of men responding in unison to the orders (i. e., the origins of action) of an officer. In a court room, the judge commands the assembly to come to order; in church, the priest, or minister, leads the congregation in prayer. As we shall see later on, these groups or set events, in which one person habitually originates action to a number of others, are of great importance in building up the relations of individuals in institutions."[1])

We also think that Homans' definition of the group is no definition; it only calls attention to certain social phenomena or data. Homans says: "If we say that individuals A, B, C, D, E .... form a group, this will mean that at least the following circumstances hold. Within a given period of time, A interacts more often with B, C, D, E .... than he does with M, N, L, O, P, ... whom we choose to consider outsiders or members of other groups. B also interacts more often with A, C, D, E, ... than he does with outsiders, and so on for the other members of the group."[2]) W. J. H. Sprott follows Homans, when he describes the group in the following way: "A group, in the social psychological sense, is a plurality of persons who interact with one another in a given context more than they interact with anyone else."[3]) In my opinion these definitions are no real definitions, but examples of everyday observations of social phenomena, which cannot, or at least only with difficulty, be explained by means of psychological conceptual apparatus. Thus the starting-point for sociological science is the social anthropological observations that people behave habitually in certain situations, and that this habitual behaviour varies from community to community in such a way that it is hardly probable that the variations have biological causes. In addition, one might call attention to the common experience that people cooperate and influence each other mutually according to a fixed behaviour pattern. It could even be asserted that everyday observations establish the fact that there are different degrees and types of understanding and contact between people in interaction.

According to this interpretation of the theory of the knowledge of sociology, we should continuously make new observations and epitomize the experience gained, but we need not, through theoretical constructions, overstep the mark of what is obviously given, i. e. the social habits, ways of cooperation etc. By observing the habits a, b, c, and d we may e. g. find some common feature in the social habit. From our experience and observations we may, by way of inductions, lay down some general laws, but the theories must not bar the concrete, living reality to us.

1) Chapple and Coon, *Social Anthropology,* 1944, p. 37.
2) Homans, G., *The Human Group,* 1950, p. 84.
3) Sprott, W. J. H., *Human Groups,* 1958, p. 9.

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This naive realistic attitude is not uncommon among sociologists; therefore, we shall have to examine the idea of what is obviously given before going into details about the above-mentioned idea of the necessity of a theory. In so doing I shall have to draw some parallels with the formation of concepts in natural science. It remains, of course, an open question whether such a juxtaposition of the social sciences and the natural sciences is justified and profitable. The question is raised by e. g. H. Blumer in an article in the American Sociological Review called "What is Wrong With Social Theory?"[4]) What is obviously given in sociology, he asserts, is something unique, and the unique "natural social world" does not permit of being caught in what Blumer calls "definitive concepts", which aim at referring a certain object having certain properties to a class of objects with exactly the same properties. Instead of the definitive concepts the sociologist should use "sensitizing concepts". Blumer draws the line between the two types of concepts in following manner: "Whereas definitive concepts provide prescriptions of what to see, sensitizing concepts merely suggest directions along which to look."[4]) Sensitizing concepts are wanting in precise and definite references, having no roots in reality, which is due to the fact, in Blumer's opinion, that we cannot as far as sociological concepts are concerned, disregard the specific and particular features in the individual objects. The individual case cannot be embraced or framed in the conceptual framework. From the unique and elaborate form of the individual case we conclude that the latter covers part of our concept. We shall not find, he believes, the concept ready to hand and specified once for all, but from case to case we shall have to find out if the concept fits in. Take e. g. the concept of the group. We indicate only vaguely what we mean by group; later on there may appear a phenomenon which we are agreed to refer to the class of things called the group, although the phenomenon is wanting in a certain number of the properties that have earlier been said to distinguish social groups. What Blumer considers the distinguishing-mark of sociology is that which Florian Znaniecki has described as a science which solves its problems through direct observation. It is a clinical sociology, Znaniecki says.[5]) Blumer's idea seems to be that it should be possible, by a continued analysis of reality, to delimit more closely the exact meaning of the sensitizing concepts. These concepts can only be conveyed through examples and illustrations; one might perhaps say through ostensive definitions. That is to say that by means of a sensitizing concept one indicates a reality and says: *This is a group! That is a group, too!*

Through minute observations one should be able to define the sensitizing concepts so as to say: *This is a family group! That is a typical urban family group!* Blumer

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4) *American Sociological Review*, February 1954, p. 7.
5) *American Sociological Review*, October 1954, p. 519.

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believes that one should become acquainted with social reality in its concrete and elaborate form through a continued analysis of reality, i. e. through continued observations. The operational definitions are rejected by him on three grounds:

1) Suppose that intelligence is only that which is measured by the intelligence test! Then you will only get a certain number of unique reactions, but intelligence *per se* is not a class of specimens with the same properties.

2) Suppose that intelligence is a substance, a something behind the reactions. Then this something will not be defined through the reactions.

3) The facts established by means of operational definitions are properly speaking isolated data, which are not otherwise connected with reality.

Neither will Blumer accept what we have called *nominal definition.*[6]) The reason seems to be that such a nominal definition of family-groups may exclude a great number of real families. Blumer's attitude to the formation of sociological concepts originates in his view that concepts and definitions are created through observations of the properties of the objects. Social objects have so vague and varying properties that only sensitizing concepts are useful. Thus sociology is in the main thrown upon *ostensive definitions.* The sociologist should indicate a certain number of phenomena and say: This is the sociological phenomenon A, that is the sociological phenomenon B, etc.

The question arising is: *What does an ostensive definition imply?* Again, what do we presuppose when dealing with sensitizing concepts of Blumer's type?[7])

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6) See my paper Facts and Theory in Sociological Investigations, *Sociala meddelanden,* n° 11, 1954.

7) I have concerned myself with that problem in the paper Some Notes on Definitions in Empirical Science, 1957, p. 14 et seq. In the book *Organizations* (1958) by J. G. March and H. A. Simon, the following statement reflecting the problems of sociology in this area may be found: "This book is about the theory of formal organizations. It is easier, and probably more useful, to give examples of formal organizations than to define the term. The United States Steel Corporation is a formal organization; so is the Red Cross, the corner grocery store, the New York State Highway Department. The latter organization is, of course, part of a larger one — The New York State government. But for present purposes we need not trouble ourselves about the precise boundaries to be drawn around an organization or the distinction between an 'organization' and a 'nonorganization'. We are dealing with empirical phenomena, and the world has an uncomfortable way of not permitting itself to be fitted into clean classifications" (p. 11). In my opinion this is a wrong approach to the problem: if the world really is to be the object of our knowledge, we must possess precise definitions of concepts. In his *Symposium on Sociological Theory,* ed. L. Gross, 1959, Robert Bierstedt has an article called Nominal and Real Definition in Sociological Theory. In this article he renders a discussion between Georg A. Lundberg and Herbert Blumer. Lundberg maintained, according to Bierstedt, that it is important and indeed necessary to have clear and carefully articulated definitions of our concepts before we

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The question is, whether the sociologist indicates only a certain number of individual data, of historical incidents of a once-for-all-nature. If there is to be any difference between social history and sociology, observations of this kind are not merely observations of historical data of the type "at a certain time these people reacted in the manner described above", but the sociologist also believes that he is able to state that *provided* no changes occur, then the very same behaviour and the same forms of cooperation are to be expected in the future. The observations made by Chapple and Coon or Homans aim at shedding light on common sociological laws. In my opinion sociology, just like the natural sciences, asserts its claims of foretelling future events. A. Pap says:

"If with regard to each chair in this room it can be conclusively verified that it is brown, the universal proposition 'all the chairs in this room are brown' would be established with certainty. However, none of the universal propositions which science attempts to establish are of this type. They refer to an indefinite number of instances to which they might be applied, as is evident from the fact that *scientific generalizations are used for predictions.* Even a simple law like Kepler's first law 'all the planets revolve round the sun in elliptic orbits' is more than a summary of past observations: first there is a reference to an indefinite number of successive positions; secondly, the law contains the prediction that the planets will always move that way; thirdly, the law is meant to apply to any planet that might in the future be discovered."[8])

What the predictive element in Chapple and Coon or in Homans implies is: If you observe people in a barracks or in a courtroom or people in cooperation for a certain defined purpose, you will also have to observe the ensuing observable behaviour. *Observe, therefore, people in these situations! Make such and such experiments, and see if people do not behave in this way!*

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begin our inquiries in order that we may always know what it is that we are talking about. For this purpose he advocated, of course, the adoption of 'operational' definitions, an advocacy be supported on the ground that, among other advantages, the meaning of the concept defined would always be closely associated with the procedures employed in investigating the phenomenon in question, metaphysical controversies over 'real' essences or meanings would be avoided, and the progress of science in sociology would thereby be enhanced.

The other protagonist, Herbert Blumer, maintained on the contrary that clear and accurate definitions of our concepts can neither be 'given' nor 'constructed' at the beginning of inquiry, that in scientific procedure it is not always desirable to have exact definitions (because they may put a cloture on research), and that, in any event, a definition emerges properly only as one of the results and consequences of inquiry" (p. 121). It will appear from the continued reasoning that I for one do not agree with Blumer's attitude.

8) Pap, A., *Elements of Analytic Philosophy,* 1949, p. 164.

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When making such predictions we obviously take it for granted that reality has a certain constant nature. Our sociological observations or everyday perceptions indicate a collective factor behind the incidents observed. We could even say: We observe a certain number of phenomena of the kind described by Chapple and Coon or Homans. These phenomena a, b or c are properties belonging to the object X. But X is known only through a, b, and c. By such an argument we have made a hypothesis about the nature of social reality. Perhaps this becomes clearer if we say: the more a, the less b. We then assume that X has a certain structure, which finds expression not only in the properties a, b, c, but also in their mutual relations

The task of sociological science is not only to describe data, but also to determine more closely, i.e. to define, the nature of this hypothetic collective factor. It is absolutely *necessary* to define and elaborate the sociological theory in that way, if we are to understand, explain and above all to predict phenomena of the type referred to above. In so doing we are touching on the scope of definitions and scientific explanations.

In my opinion the formation of concepts always implicates the construction of a language, which becomes instrumental in giving the scientific reality a certain structure. In that respect there cannot be any essential difference between the social sciences and the natural sciences. Even that which is thought of as being immediately given originates in linguistic acquisition. We do not immediately and with so to speak innocent eyes perceive what Blumer singles out as being typically social objects: groups, norms, habits; they only constitute properties belonging to reality because they are classified in linguistic categories. When Blumer speaks about defining the sensitizing concepts, he really defines linguistic usage.

The arguments advanced can be summed up in the following manner: I raise the question if not all sociologists make some hypotheses about the nature of social reality, whether they intend to do so or not. The objection which might be raised to such an assertion is that our task is not to theorize, but to observe and indicate social facts. But such indications really presuppose a certain regularity in the use of words or concepts. The very person to whom I indicate something must have an idea of the meaning of the word, otherwise the indication is useless. Do we not e.g. suppose some common feature in what we time and again call a group, just as we presuppose some common feature in what we call a table?

It might, therefore, be of interest to examine more closey what exactly is meant by the term: immediately given. It is instructive for the social sciences to study how the term is used in the natural sciences and what they mean by data, by immediately given, and by immediate experience.

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3. The Given and Scientific explanation.

It is self-evident that in this place it will not be possible for me to take up the problem of the immediately given, the sensory data and the direct observation in its whole extent. That is continuously discussed within philosophy as well as the other branches of science. I must confine myself to a few notes.[9]) It must be borne in mind that apparently there does not exist any generally accepted theory about the immediately given among the leading physicists or chemists. The authors I shall refer to below have been chosen at random.

It appears to me, however, that different authors assign certain common features to what is immediately given and what is directly perceived. H. Reichenbach says: "The original world is the world of immediately existing things. It is the world of concrete objects around us, entering into our knowledge without any intellectual operations being performed by us. It is a world where there is no difference between waking and dreaming, in which everything exists exactly in the form in which it is observed."[10])

The distinguishing-marks of our immediate experience are according to this interpretation, the passiveness of the subject, the spontaneity of the experience, and the concretion of the object. In the immediate experience there is only a minimum of theoretical admixture according to this interpretation. A theorist who very clearly expresses this interpretation is the physicist Henry Margenau. He asserts that both the sociologist and the psysicist compare and compile data; the sociologist compares e.g. the frequency of church attendance with social unrest or war.[11]) But the question is what this comparison really implies. We compare the data of what is given, but what is it given? The distinguishing-mark of what is given is its *immediateness,* Margenau explains, we get a direct experience, he thinks, of reality. Reality is not something which we construct from what is given so that reality is perceived as the cause of what is given. There exist no *givers* of data, and Margenau thinks that the term of *habita* would really be better than data.[12]) Margenau, however, makes a statement which shows that he does not think there is a well-defined distinction between that which Blumer calls sensitizing and definitive concepts. There are experiences, Margenau asserts, which are only made immediately and by way of intuition, as e.g. when people in a half-dreaming state of mind enjoy a summer sky with its scattered clouds, but there also exist experiences or observations which are totally interwoven with rational relations, as e.g. when I regard the instru-

9) See Marc-Wogan, K., *Die Theorie der Sinnesdaten,* 1945, and my book *Verklighet och värde,* 1938.

10) Reichenbach, H., *Experience and Prediction,* 1952, p. 203.

11) Margenau, H.: *The Nature of Physical Reality.*

12) Ibid., p. 50.

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ment board of a scientific apparatus in order to read a result. In the same way there are concepts approximating to the intuitive experience, e.g. the concept of tree, and there exist concepts of a mathematical and theoretical nature in which the intuitive and empirical element is totally absent.[13])

Margenau holds the view that in passing from what is immediately given to language and from language to logic we lose in concretion. Thus, according to Margenau, what is given or intuitively experienced does not permit of being caught in the meshes of language or logic: "We may now properly judge the transition from meaning to language to logic. Something vital is sacrificed in every one of the steps involved, and the loss is greater in the field near perception."[14]) Typical is Margenau's comment on Carnap. He says: "A more basic difference between Carnap's position and the one developed in this book, perhaps the difference which accounts for the criticism made above, lies in our unwillingness, and in the unwillingness of most scientists, to start philosophic enquiry on the level of language. The physicist attaches much less importance to his physical language than does his generous interpreter; *experience and ideas are primary to him.* He thinks, no doubt, with some flattery to himself, that he is more at home with experiments and ideas than with linguistic or any kind of symbols. Certainly the psychological experience of every investigator is one of thought, of action, of adventure. Sudden recognitions break through unbaptized, ideas are born before they are named. Sometimes the results of a complicated theory are foreseen in general outlines even before a word is spoken or a mathematical symbol is put on paper. Through his insistance on analyzing the physical language and little else, Carnap honours but restrains physical activity. We hold with Lewis that linguistic expression of what is meant and what is apprehended is the dependent and derivate phenomenon: it is meaning and apprehension themselves which are the fundamental cognitive phenomena, and they are independant of any formulation in language."[15])

Margenau here associates himself with a conception of the importance of language for human knowledge and perception of reality which I do not share. However, before I go on to elucidate the consequences of my conception of language to the theory of knowledge adopted by the social sciences, I want to follow Margenau to a certain degree in his idea of the relation between the

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13) Ibid., p. 55.

14) Ibid., p. 57. Compare also the following statement by a sociologist: "The nature of language requires that all concepts represent abstractions from concrete reality, but science often goes many steps further in the refinement of such abstractions in the process of building theoretical systems". (James A. Schellenberg, Divisions of General Sociology, *American Sociological Review,* 1957 December, p. 660.

15) Ibid., p. 231.

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perception which is "heavily weighted on the side af immediacy" and the scientific explanation. We have already seen that Margenau counts on a continuous transition from the concrete and immediate sphere to the abstract and conceptual sphere. Margenau's approach to the problem is clearly illustrated by another physicist interested in the theory of knowledge, viz. R. B. Lindsay, professor of physics at Brown's University. He deliberately associates himself with Margenau, asserting that a physical theory begins with primitive and undefined concepts, such as time and space, but proceeds to more precisely defined concepts like mass and force in mechanics. He says: "At this point perhaps it may be well to review briefly my own conception of physical explanation, which as far as I know, is that of most theoretical physicists, although each man's phrasing is his own and there are always differences in emphasis at various points. Physical explanation ultimately is essentially deductive in character, consisting of theories whose aim is to predict the physical laws that describe physical experience. A physical theory starts with primitive, undefined concepts, such as the notions of space and time. It proceeds to the construction of more precisely defined constructs, for instance, mass and force in mechanics, into whose definitions there enter both epistemic (operational) and constitutive (theoretical) characteristics."[16]) In passing it may be worth noticing that in his characterization of the starting point in physical science Lindsay uses a phraseology reminiscent of Blumer's. I suppose that the vagueness which Blumer considers the distinguishing-mark of sociology is something which may be observed in all sciences in their initial positions. A. Pap gives the following exposition of the problem: "But it turns out that sentences about physical things are logically far more complex than one would suspect on the basis of their grammatical simplicity. If I point to a special region within my visual field and say 'that thing is a chair', I implicitly make a number of predictions as to the sensations I would have if I performed certain operations: if I sit there, I will be supported; if I touch what I see, I will feel hardness, etc. Such predictions are universal, conditioned statements; they involve variables for every x and t (if x is a normal observer and x touches the thing t, then x feels something hard, t). Thus, this apparently atomic sentence really expresses a universal proposition. Russell and other members of the Cambridge School of logical analysis express the fact that any sentence about a chair could, in the indicated manner, be translated into sentences about sense-data of observers, by saying that chairs are logical constructions out of sense-data. Since, quite generally, any statement about a physical object is testable only in terms of perceptions, physical objects are said to be logical constructions out of percepts (i.e. sense-data)."[17])

16) Lindsay, R. B., *Operationalism in Physics, Validation of Scientific Theories,* 1956, p. 70 et seq.

17) Loc. cit., p. 382 et seq.

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In my paper *Some Notes on Definition*[18]) I asserted that we make our ostensive definitions on the understanding that there exists a class of objects possessing the same properties (e.g. this is a table, and that is a table, too, for both objects have the same properties). If we make such an assumption, the ostensive definitions acquire a meaning. I should think that if we squeezed Blumer's argument about sensitizing concepts with their general suggestive function, we should see that the extra would be a similar conception.

Margenau is giving consideration to the same line of thought when saying that as the transition from what is given to language and logic is not precipitous, then our experience starts in "sensory awareness" and finishes up in organized knowledge. By means of organized knowledge we connect dissimilary fragments from our experience. The simplest form of such a connection is "things-doing", by which the different private sense-data are joined into the physical or public object "table"[19]). Thus we must operate with an imaginary, fictitious or constructed object — or we have a tendency to do so — and that is according to my opinion, the basis of our ostensive definitions. Very soon, Margenau thinks, we go beyond what is given or immediately perceived to that which he calls theoretical constructs. We presuppose something behind what is given and something more than that which we experience immediately[20]). Constructs are not subject to discovery. In many respects they have the nature of inventions, but they are useful and applicable inventions. By *useful* and *applicable* Margenau means obviously that they enable us to explain a considerable part of our immediate perceptions, and they establish order in the complexity of data.

Accordingly Margenau's conception is as follows: We operate with what is given (sense-data or observations) and the intellectually made constructs. The constructs must permit of being fitted into a theory: this is possible only provided that the *constructs* can be given a *theoretical* definition which combines them with other constructs[21]). In that way a group or a section of constructs is obtained. Margenau calls this section the C-field as opposed to the P-field (the perception-field). For the C-field he establishes certain laws, which, if anything, must be said to have a traditional nature: "The requirement A of Logical Fertility, B of Multiple Connections, C of Permanence and Stability, D of Extensibility of Construction, E of Causality, F of Simplicity and Elegance."

But it is necessary to find a transition from the C-field to the P-field. "But it must also be empirically verifiable, and this requires a linkage with observations

18) Ibid., p. 14.

19) Loc. cit., p. 58.

20) Ibid., p. 70.

21) See my paper *Facts and Theories in Sociological Investigations* and Zetterberg, Hans L., *On Theory and Verification in Sociology*, 1954, p. 16.

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via operational procedures. Thus it is necessary, and a survey of scientific method shows this to be true, that every accepted scientific measurable quantity have at least two definitions, one formal and one instrumental. It is an interesting task to show how some sciences fail to become exact because they ignore this dual character of the definitory process. Omission of operational definitions leads to sterile speculation, to metaphysics in the sense of the detractors of that discipline; disregard of formal (or 'constitutive') definitions leads to that blind empiricism which misses the power and the beauty of modern physical science"[22]). It is interesting to see how the transition from the C-field to the P-field to Margenau becomes a question of the relationship between different types of definitions. Margenau distinguishes between *epistemic* or *operational* definitions and *constitutive* or *theoretical* definitions. Constructs are established through constitutive definitions in view of the fact that the transition from the C-field to the P-field is facilitated by epistemic or operational definitions. "Without assigning priority, we have noted a difference between two large classes of definitions, a duality which must be more carefully specified. Let us return to one of our examples, time. One way to define it is by reference to a clock; another views it as the independent variable in the laws (and in the equations) of motion. The first is operational, to use Bridgman's term; it might also be called instrumental in order to leave no doubt that an actual use of physical instruments is involved. In an earlier publication[23]) I have called it epistemic; it establishes a rule of a correspondence between the constructs Time and Nature. This represents the true character of every member of this class of definitions as a review of the preceding instances in this section will show. Operational or epistemic definitions are always rules of correspondence. The second definition of time does not address itself to Nature. It remains in the C-field linking together several constructs. It tells *what* time is in a way the epistemic definition, which serves mainly to assign numbers, does not do. But it provides no independent measure of time. For want of a better name let us call it a constitutive definition"[24]).

Margenau's starting point is immediate experience. It is a passive wordless perception of reality in its unique and concrete form. In making propositions, i. e. when we introduce language and logic, we leave the immediate genuine reality and construct permanent things behind these *habita.* In so doing we come to deal with constructs. Such constructs constitute the fundamentals of all science. Further on we see how Margenau visualized the transition between the field of constructs section and the field of perceptions.

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22) Interpretations and Misinterpretations of Operationalism in the book *Validation of Scientific Theories,* p. 40.

23) Phil. Sc. 2.48, 164 (1935).

24) The Nature of Physical Reality, p. 236.

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Before we go into details about these problems, I shall quote another author and give a brief account of some views held by him; this time it is a philosopher, who touches on the very problems with which we are concerned.

These theories are expounded by Ernest H. Hutten. He analyses, inter alia, the concept of "observables". By way of introduction he establishes the fact that all natural science must begin and end up with experience. This implicates that the physical elements must be observable. What does he mean by the term of observable? Hutten primarily establishes the fact that when in every-day life we say that an object is observable, we think of *secondary qualities;* only the secondary qualities are directly observable. Consequently we should, according to Hutten, distinguish between what it is logically, physically and technically possible to observe. The logical impossibility has the largest scope. It must be considered physically possible to observe an object as long as no physical law makes it impossible. In the present situation, however, it is technically impossible to observe a great number of objects. It is neither logically nor physically impossible to observe the back of the moon, but at the present moment it is probably technically impossible (or rather it was when Hutten wrote his book)[25]). Hutten goes on to distinguish between direct and indirect observability. "Moreover, we have to distinguish between direct and indirect observability. No doubt we must take some things as being directly observable — or we could not begin to do science. But the more science advances, the more indirect observations come in"[26]). If we admit that things may be indirectly observable, we can no longer assert, according to Hutten, that the secondary properties constitute any *conditio sine qua non* to observation. "Although, by definition, the electron cannot have secondary qualities — being invented, as it were, just to 'explain' those qualities — the electron is still observable. To deny the use of scientific instruments as means of observation while, say, accepting human eyes for the purpose, is not defensible"[27]). "Electrons are not arbitrarily invented to 'explain' secondary qualities, although the concept of electrons is invented for the purpose of describing experience more accurately. 'Electrons' and 'atoms' are terms used in a more 'abstract', i. e. technical language: the language of physics differs from ordinary language in which we use terms that designate secondary qualities. We shift from language to another language of different semantic type. And we can, if we want to, extend the use of terms such as 'observable' to scientific language in a perfectly consistent manner"[28]). A thing is observable, directly or indirectly, provided we can indicate a method or a procedure of observing it. "A thing or event is observable if sentences about them can be tested by the theories

25) Hutten, Ernest H., *The Language of Modern Phycics,* 1956.
26) Ibid., p. 52.
27) Ibid., p. 53.
28) Ibid., p. 53.

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and procedures of science"[29]). Hutten believes that we have no reason of keeping to the bare sense-data language only: „After all, sometimes we wish to refer to physical things and sometimes to 'abstract' entities. The point is to make the language do the job we want it to do. So when we refer to unfamiliar entities like electrons or to 'abstract' entities such as numbers, this does not commit us to say anything about their existence"[30]). Hutten believes that the immediate experience of every-day life is above all based on the secondary qualities. The indirect observations made in natural science apply to the primary properties.

The division into primary, secondary, and tertiary qualities has been given some consideration in my earlier papers, *The Group as a System of Communication,* and *Symbol Environment, Meaning, and Attitude*[31]). I have attempted to demonstrate how both primary and secondary qualities depend on a socially conditioned learning process. Margenau points out how opinion has differed, in different periods of the history of philosophy and physics, as to what should be regarded as primary and secondary qualities[32]). This viewpoint supports my conception that it is the scientific usage of language that makes us distinguish between secondary and primary qualities, and that the primary qualities are represented in the way indicated by e. g. Pap, as possessing the secondary qualities. In my paper, *Some Notes on Definition,* I have said that the ostensive-classifying definition, by enumerating common properties, presupposes something possessing of the properties. A flower having the properties a, b, and c belongs to the family of Compositae. What such a definition implicates is: If a botanist says that this is a flower belonging to the family of Compositae, then he really wants to say: *This flower has the properties a, b, and c; Find out if the flower has not the properties a, b, and c!* But an ostensive definition often implies an indication of the activities of the thing possessing the properties: *The individuals of the cat family have the properties a, b, and c, and they are carnivores, i. e. catch and kill their prey. This is a cat! See if it has not the properties a, b, and c and kills its prey!*

Suppose we regard certain primary qualities as also possessing the secondary qualities. Then it must be clearly borne in mind that e.g. a *table,* as an entity and as possessing a certain number of properties, qua entity still has its special meaning, and that on hearing the *word* table we behave otherwise than on hearing the *word* chair, because table as an object has its own special properties which are not exhausted by an enumeration of the secondary properties. The meaning of

29) Ibid., p. 53.
30) Ibid., p. 57.
31) Gruppen som kommunikationssystem, 1955, p. 7 et seq. & 14 et seq., and Symbolmiljö, mening och attityd, 1956, p. 22 et seq.
32) Loc. cit., p. 6 et seq.

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the primary quality is just this unity of behaviour of the observer and the unity of describing qualities and behaviour on the part of the object observed.

That which Lindsay calls "the primitive, undefined concepts" is, in my opinion, every-day language. In some cases the latter is relatively well-defined for every-day usage. The expression: "The red book is on the oak-table! Will you go and get it, please!" is absolutely sufficiently defined for the purpose of provoking adequate actions. Similarly the prediction: "If you go into the sitting-room, you will find Ferlin's latest collection of poems on the round oak-table!" If we then ask: "What do you mean by *oak-table?*" the spontaneous answer will probably be given in the form of an ostensive definition: "This is an oak-table!" The so-called every-day language uses ostensive definitions to a great extent. According to Blumer this also holds true of sociology, as far as its usage of *sensitizing* concepts is concerned. But if common sense is pressed to yield more than the ostensive definitions of every-day language, then we we get a reality analysis of the type: The oak-table has such and such properties. Table *per se* cannot be defined by every-day language, but only indicated by an enumeration of its properties; table *per se* possesses certain properties.

Scientific language does not leave it at that, but attempts, by means of constructs, to define more closely the meaning or the nature of what is called primary properties.

It is my opinion that we cannot have any immediate, delimited perception, as e.g. of a tree or a summer sky, without a language. Again, language is a social phenomenon, an expression of the activities of a group. One group is concerned with every-day language, another group, viz. scientists, is concerned with scientific language. Data, what is immediately given, only exist for people as a result of group activity. That in itself is important to the social sciences, but reduces even the natural sciences to a social phenomenon; they manifest a certain kind of group activity. Language is not something which estranges us from reality, but a prerequisite of our perception of it. This has been expressed by Peter Winch in the following manner: "So to understand the activities of an individual, scientific investigator we must take account of two sets of relations: first, his relation to the phenomena which he investigates; second, his relation to his fellow-scientists. Both of these are essential to the sense of saying that he is 'detecting regularities' or 'discovering uniformities'; but writers on scientific 'methodology' too often concentrate on the first and overlook the importance of the second. That they must belong to different types is evident from the following considerations. — The phenomena being investigated present themselves to the scientist as an *object* of study; he observes them and notices certain facts about them. But to say of a man that he does this presupposes that he already has made a mode of communication in the use of which rules are already being observed. For to notice something is

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to identify relevant characteristics, which means that the noticer must have some *concept* of such characteristics; this is possible only if is he able to use some symbol according to a rule which makes it refer to those characteristics. So we come back to his relation to his fellow-scientists, in which context alone he can be spoken of as following such a rule."[33])

Margenau believes that all science proceeds from a wordless experience of reality. Via language and logic we reach a construct section. Again, he explains, the construct section becomes a bare and inanimate lunar landscape, if we do not, via operational definitions, return to the perception section. But the perception section we now find cannot be wordless, — in my opinion, — otherwise the whole scientific excursion to the field of constructs would be futile. Without words the scientist cannot identify relevant properties.

According to my opinion, however, even the perception field of common sense, which constitutes the starting point of our constructs, is interwoven with language. It is language that determines our reactions and represents the properties of the object in a manner which, to state it simply, suffices for every-day life and the situations which ordinary people meet with when they want to anticipate the incidents of every-day life. But this language does not provoke actions adequate for the anticipation of large-scale events covering a longer period — no matter whether we want to predict what is going to happen in nature or in society. Therefore, when we find ourselves back in the perception field after the visit to the constructfield, we shall have to revise the language with which we want to communicate with other scientists. Thus, we are constantly concerned with words with different levels of meaning, words belonging to different groups and determining the behaviour of members of different groups. When speaking about the meaning of a word, I do so in the manner which I have attempted to expound in some earlier papers.

4. *Scientific Constructions and Language.*

In earlier papers I have made several attempts to expound my theory of the importance of language to the conception of reality. My ideas can be summed up in the following manner: Man is born with certain original demands. These congenital demands are reflected in activity directed against the surrounding world. This activity is, however, undifferentiated and blind, and it is reasonable to assume that the outside world is experienced as similarly unstructured. The introduction of a child into a social environment implicates that the actions

33) Winch, Peter, *The Idea of a Social Science*, p. 84 et seq.

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dictated by demands are specified and directed towards definite ends. In this way reality assumes structure. In my paper *Symbolic Environment, Meaning and Attitude* I have discussed three kinds of satisfaction of demand: (1) Original demands which are satisfied in a way which are socially approved, (2) original demands which are satisfied in a way which are socially disapproved and (3) acquired demands which are satisfied in a way which may be either socially approved or disapproved. In the last case we have a typical product of civilization. In all these cases of learning the word constitutes an essential part, and it is the word, as a symbol of the whole situation of reaction, that determines our actions.[34]) Without language, reality would only be a perception here and now, without any structure or pattern, and without any general content. This line of thought has recently been elucidated by J. S. Brunner, J. J. Goodnow, and G. H. Austin[35]). These authors assert that learning is a form of preparedness for a certain class of things; to these objects one is expected to react in one and the same way because things (by and large) remain the same. "One may distinguish three broad classes of equivalence categories, each distinguished by the kind of defining response involved. They may be called affective, functional, and formal categories."

The *affective* categories presumably correspond to what I, in earlier papers, have called the emotional sector of total reaction, described above by the term of tertiary qualities. Brunner and his cooperators believe that the affective category originates in childhood. Though it is a paranthesis, it may give an interesting suggestion for an investigation of the way in which we attempt to verbalize emotional reaction. Does the language of tertiary properties have anything referring to early childhood and only to that period of life?

The purpose of the *functional* category is to indicate what properties the object has in the aspect of utility or use. A hammer, e.g., is something which is used to drive in nails, and it is that which the object is used for that causes it to be reckoned to the same class as other objects.

The *formal* categories come into existence when the attributes necessarily belonging to objects of one and the same class are specifed. "Formal categories are constructed by the act of specifying the intrinsic attribute properties required by the members of a class. Such categories have the characteristic that one can state reliably the diacritia of a class of objects or events short of describing their use. The formal properties of science are a case in points. Oftentimes the careful specification of a defining property even requires the constructions of a special 'artificial' language to indicate that common sense functional categories are not

34) Beside Symbolmiljö, mening och attityd, p. 14 et seq. see also Osgood et al. *The Measurement of Meaning*, 1957, p. 6 et seq., in which some of the ideas from Symbol Environment, Meaning and Attitude have been carried out experimentally.

35) J. C. Brunner, J. J. Goodnow, and G. H. Austin, *A study of Thinking*, 1956, p. 4.

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being used. The concept 'force' in physics and the word standing for the functional class or events called 'force' in common sense do not have the same kind of definition. — — The development of formal categories is, of course, tantamount to science-making and we need not pause here to discuss this rather impenetrable problem. It suffices to note that formal categories and formal category systems appear to develop concurrently with methods for representing and manipulating them symbolically.[36])

By the act of categorizing, the authors say, (1) the complexity of environment is lessened, (2) the objects become identifiable, i.e. they can be placed in the same class of things or beings, (3) the requirement of acquisition abates, as it is not necessary to repeat the learning process each time an object of the same class appears because a rough idea of how to react is already present in the mind.[37]) From the act of categorizing we know in advance the approriate action.[38]) The fifth advantage is that events can be grouped and systematized: "For we operate, as noted before, with category *systems* — classes of events that are related to each other in various kinds of superordinate systems. We map and give meaning to our world by relating classes or events rather than by relating individual events. — 'Matches', the child learns, will 'cause' a set of events called 'fires'. The meaning of each class of things placed in quotation marks — matches, causes, and fires — is given by the embeddedness of each class in such relationship maps."[39])

Thus Brunner and Goodnow attach great importance to the circumstance that the formation of linguistic categories enables us to anticipate the properties of reality. Because reality has been mapped out, we can quickly anticipate the reactions of reality upon ourselves. This task of every-day language is equally the task of the scientific language. The latter is instrumental in our creation of categories which to a certain degree assume a hypothetical nature; in that way we are enabled to anticipate the behaviour of reality. This anticipation does, in fact, contain a strong element of communication: by means of the linguistic expressions we can both direct other persons' actions and warn them against the

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36) 1956, p. 2.

37) Ibid., p. 5 et seq.

38) Ibid., p. 13.

39) Ibid., p. 14, This is emphasized by Niels Bohr in his book *Atomfysik og menneskelig erkendelse,* p. 83.

"Any scientist is, however, constantly faced with the problem of describing experiences objectively, by which we simply mean unambigous information. Our fundamental instrument is, of course, everyday language which serves the interests of practical life and social intercourse, and we shall not concern ourselves with the origin of this language here, but with its scope for scientific information and particularly with the problem of how to maintain objectivity in description when the field of experience exceeds the events of everyday life" (p. 83). See also *Ordens makt,* p. 136 et seq.

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reactions of a certain reality. If, by analogy with Margenau's terminology, we call the specific scientific language the C-language, the scientific language is thus concerned with communicating and co-ordinating actions among scientists.

The object of scientific communication is, like any symbolic communication, to act on people, to make them react and anticipate reactions on words but this presupposes that words have a meaning. In my opinion a construct word (a sentence word), that is a word belonging to the C-language, has a meaning if the following, systematically arranged conditions are fulfilled:

1) The construct word is described by indicating the different elements considered to be related in the model or construct. In this description the criteria indicated by Margenau for a good construct must, as a rule, be fulfilled. I use the expression *as a rule,* because the model in certain cases may imply contradictions or complementary concepts. By this type of definition or description, however, the construct words *per se* have not assumed any meaning.

2) The indication of the different elements of the construct or model implies a definition of the properties of the construct. The model (the construct) A has the properties x, y, and z. After that it can be indicated how x, y, and z are to be observed. This may result in the following statements: This is x, that is y, and here is z! That is to say that x, y, and z can be ostentatively defined. Then the properties x, y, and z have assumed a meaning in common linguistic usage, i.e. they form part of some general situation. The properties, however, are properties belonging to A, and A is their entity. Towards *the entity* of x, y, and z people behave in a definite and regular way; x, y, and z form part of the general situation of A; so the word A is, in my opinion, a *sentence word* having the meaning of sentence words. The word *book* is an *object-word* because in the total general situation in which the *word* book gets its meaning is the real *object* book present. A *sentence-word* has another word as object in the general total situation and that word, which is the object of the sentence-word, must consequently have attained a meaning. The word included in the total general situation of the word *group,* e.g., are norm-source, norm, sanction and social custom. Those words are either object words or, in their turn, sentence words, which have other words as objects.

3) In certain cases the pedigree of the words may be somewhat longer. That is the case if a statement is made on A's way of functioning. If I say that a certain quantity of A functions better than another quantity of A (smaller groups are more effective than bigger groups, e.g.), then I must usually say that in larger A, x has another structure than in smaller A. I then have to give a more detailed indication of the different values of x and of the way x is to be observed, and, in addition, I have to give an operational definition of how to measure that which I have vaguely called *functions better than.* In this way operational definitions

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are included in the picture in the manner mentioned by Margenau[40]). This is, no doubt, the general procedure provided I want not only to define and classify objects, but also to make predictions about their way of functioning.

Following this conception, the transition from the C-field to the P-field does not constitute any difficult problem. A definition of the general situation of the C-words must, if the words are to be a model or a construct with meaning, lead to the P-field. The description of how the C-words assume a meaning has, in my opinion, a general validity. The difficulties met with by Margenau originate in his mistrust of language. Thus, the thesis that I have attempted to maintain is as follows: In principle, sentences of the kind that sociologists, according to Blumer, can make, as well as the sentences pronounced by Chapple and Coon or Homans or Sprott, can be compared with sense-data sentences and ostentive definitions. Thus, these sentences presuppose, just as the ostensive definitions and the sense-data sentences do, something more than what is immediately given; they point beyond that which is given, as emphasized by Pap, Margenau *et al.* It is a circumstance which is due to the very fact that the word has a *meaning.*

If a sociologist, according to Blumer, only may point at a phenomenon and say that is a group, and that is another group, such a way of pointing is possible only if the *word group* has got some kind of meaning. The same holds true if a sociologist following Homans says that A, B and C cooperate more than D, E, and F and consequently A, B and C form a group. It is true that you can not point at the group as such but only at certain modes of cooperation, but never the less does the word *group* mean something else than the word *mass* or *crowd.* And it does mean the same everytime you point at a social phenomenon and calls it a group. In and by, assuming a meaning the word receives an admixture of generality (as pointed out by Brunner *et al),* it is a habitual reaction towards an object and at the same time a habitual anticipation of the properties of the object. One might even say that the very meaning of a word presupposes a norm — causes a regular reaction directed against environment. But a regular reaction must implicate generalized reaction. That is actually conveyed by the circumstance that the reaction is acquired. Even if the words or the concepts only *"suggest directions along which to look",* i.e. constitute a kind of relatively primitive ostensive definitions, they do implicate a certain number of hypotheses, which again form the basis of predictions. Even an indication and a suggestion of the kind that the sociologist has to content himself with according to Blumer, presupposes a common symbol environment. Sociologists must know the scope of the vague concepts they use — otherwise it will be meaningless to speak of communication

40) Vide my paper Some Notes on Definition, p. 30.

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among them. They must have a common group language, and even when language is used as presupposed by Blumer, it implicates certain common hypotheses accepted by sociologists. It is the uncertainty about the implications of these hypotheses that constitutes the greatest difficulty of sociology in attaining to a system of knowledge, knowledge to be increased and revised by new investigations.

Thus, one is justified to a high degree in asking what is meant by certain central terms in sociology, e.g. by the nature of the word *group*. This amounts to attempts to find out what prerequisites are involved in the statement: *this is a group*. What rules apply to the usage of the word group, and what theoretical constructs are sociological data based on? These questions bring us back to the question of what is immediately given and of theoretical constructs in sociology.

5. *Sociological Data, Language and the Sociological Constructs.*

The theory of knowledge has, it seems, almost exclusively dealt with data of natural science. The analysis in the preceding passages has, however, led to the interesting result that even natural sciences are expressions of social activity, and that immediate data are only possible in a group possessing a language. This must apply to social sciences: the work of social science is an expression of the activities of a separate group.

Now the question is what we can regard as being immediately given, as data in sociology. That which is given must be that which every-day language points out to be something typical for social life. In quoting Chapple and Coon and Homans I have given attention to some of these data that common linguistic usage has become aware of. It may perhaps be summed up in the following way: What is given in sociology is linguistic expressions, people who pronounce the words, a repeated and uniform behaviour. Under uniform actions we include language. The uniform and repeated behaviour is immediately observable both as reactions to sounds (words) and towards objects (things). It is furthermore immediately observable that different sounds and different things cause different forms of uniform and repeated behaviour, and that the stimulating objects have different meanings. Meaning in this sense is immediately given, interaction and intercommunication too. That was the point from which Homans departed in defining group. These are the phenomena comparable to the secondary qualities of physics or the objects belonging to the P-field, wanting an explanation. In order to understand them it is necessary, as in physics, to operate with a C-field, and it is necessary, also in sociology, to operate with direct and indirect observations. It can be seen from many examples in sociological literature that this is really done: Thus we say e.g. that groups made up by members who have grown up in uniform environments cooperate better than groups made up by

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members who have grown up in different environments, and we make predictions about the habitual behaviour of different groups.

As far as primary and secondary properties, direct and indirect observations are concerned, it would be meaningful to draw parallels between sociological or social-scientific investigation and natural sciences. Although it has to be carried out in detail, the outcome will be that working with the P-field and the C-field within sociological investigation should really be successful. But in presupposing a C-field we must also presuppose certain accepted common features in social reality. In my opinion it is a question of linguistic usage: different levels for the meanings of words. Words belonging to the C-field are sentence words. (Sentence words are words having other words as objects).[41]) The word *group* is such a sentence word.

If we admit that we may operate with the C-field in sociology, we have also accepted that sociology presupposes a theory of social reality as its starting point. But in so doing we do not tell anything about its nature.

The question is if the construct-field of sociology differs in principal from the C-field of natural science. Winch has drawn attention to an important difference between social science and natural science.[42]) In both sciences the activity is group activity, which implicates that the words have a meaning only within a group, i.e. that there are certain norms and laws for the usage of words within the natural-scientific community as well as within the social-scientific community. Natural sciences study certain regularities, and so do the social sciences. But the regularities of the social sciences are of the same kind as the social-scientific studies and social-scientific research themselves. The sociologists constitute a group concerned with studying other groups. If I say that an important point of this study consists in observations of the disposition of the group endeavouring to realize its aim, then it has to be examined firstly, what the group considers to be its aim, secondly, the prevailing attitude within the group towards the aim, and thirdly, what actions are performed in order to realize the aim. In order to carry out his examination the sociologist often has to interfere with the life of the group, and it is possible that the scientific results are utilized by the leaders of the group as an argument for hastening or twisting the procedure of realizing the aim. Social-scientific education proceeds from the basic view that it is desirable that the individuals of society possess knowledge about the social-scientific relations. A similar view is not to be found in natural-scientific research and education. Even if the observing subject may to some degree affect the object, we do not think that the object can be guided by established natural-scientific laws and regulate its behaviour accordingly.

41) See Some Notes on Definitions, p. 34 et seq., and Symbolmiljö, mening och attityd, p. 26.
42) Loc. cit., p. 45.

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This difference, as emphasized by Winch who is following Max Weber, should in my opinion be borne in mind appropriately when the sociological C-field and its language is discussed.

The preceding account has aimed at making it clear that all sciences must bring a construct-field, in Margenau's sense of the word, under cultivation. As far as I can see, this amounts to saying that all sciences use sentence words. The problem that will be set by the present paper is: What sentence words are absolutely necessary in sociology, necessary in so far that if such and such a sentence word is cut out from the word-list of sociology, then the existence of a specific sociological science is denied. It will probably not be possible for any science to make a complete dictionary of necessary sentence words, but it appears to me that one should at least be able to indicate some sentence words pointing towards the field of constructs. That ought to be satisfactory, as all sentence words must be supposed to hang together from a systematical point of view.

It is to be supposed that there exist certain sentence words that are always used in communication within a group of scientists, e.g. certain words in communications between zoologists, others in communications between physicists, others again in inter-communication among students of law. As far as sociologists are concerned, I have repeatedly pointed out that the words intercommunication, symbol, interaction, cooperation, and habit or uniform behaviour appear in their mutual communications. We have also seen that these words only assume a meaning when used within the reference system of the group involved. Habits, interaction, symbol environment can only assume a meaning when it is a question of a group of people in interaction with the same habits, the same symbols. Thus it cannot be asserted that sociologists operate with interaction or habits without presuming a group concept. In sociology the word *group* thus becomes a central sentence word. The question is what is meant by the word group, what is the meaning of this sentence word. We must indeed take it for granted that the word group, as a sentence word, has a specific meaning. That condition must be fulfilled if a certain number of standing sociological propositions are to have a communicable meaning. The question is thus: What other words are involved in the general situation of this central sentence word?

The concept of the norm must be a central one in the construct or the model. The concept of norm constitutes, as Winch has pointed out,[43]) a prerequisite of the concepts of symbol and intercommunication. The symbol can only have the same meaning for people obeying the same norm system.

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43) Winch says: "I have claimed that the analysis of meaningful behaviour must allot a central role to the notion of a rule; that all behaviour which is meaningful (therefore all specifically human behaviour) is ipso facto rulegoverned" (Loc. cit. p. 51 et seq.).

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But norms cannot float in the air, but presuppose a *norm speaker* (a norm source) who pronounces them and considers how to make them observed. Symbols, however, are not unique in presupposing norm sources and the activities of norms; so do all social habits of the kind which Chapple and Coon speak of. This leads us then to the definition of group which I have made, among other places in the paper *The Group as a System of Communication: The social phenomenon X is a group if, and only if, X has a norm source, a norm and uniform behaviour which implies that X interacts for one or several common aims.*[44])

It is clear that this definition of the use of the word *group* might be worked out in greater detail. If, however, the definition is specified, certain specifications turn out to be little short of hypotheses and thus it proves to be only a temporary definition. We might e.g. say that a group with strongly emotional norms differs from a group with strongly imperative norms as far as interaction between the members of the group is concerned, so that we in that respect have two types of groups. Such a classification must, however, be verified. Still, a claim to these temporary definitions is that they operate with the elements of the group concept: they must keep within the system of reference concerned.

Some definitions can, however, be said to be analytical in the sense that they result from the group concept. The concepts norm, norm-source, and habit belong to this type of definitions. Likewise sanction. Thus we can for each group ask for the nature of the norm system, the norm-source and the sanction procedure. At the same time an important empirical-scientific task consists, in my opinion, in finding out what types of sanction are used by the norm-source, how the norm-source is composed, the character of the norms, and how different types of norms etc. hang together with different symbolic environments and with the social medium on the whole. In that way we may attain to certain principles of classification. An important factor in all attempts of classification and in any description or hypothesis concerning the group (and thus also in any experiment with groups) is the *concept of aim*. The concept of aim forms part of my definition of the word group. In my paper *Education and Community* I have given a detailed analysis of the concept of aim showing that three elements are contained in that concept, viz. the element of reproduction, the element of socialization, and the element of production. A group cannot exist without somehow recruiting its members, i.e. renewing itself; it must keep symbolic environment alive if there is to be any cooperation, interaction, and intercommunication and the group has a task, something to be realized. Thus, for all existing groups it must be meaningful to ask questions about these aspects or functions. When it is a question of describing or analyzing a community or a social system, it is, in addition,

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44) Ibid., p. 7.

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necessary and meaningful to examine the different groups forming around the three aims and to attempt, by way of operational definitions, to describe to which group the greatest importance is to be attributed.[45])

Thus, for all sociological science it must be meaningful to ask questions of the type which I shall illustrate by examplets below and as far as sociologists are concerned, we must also demand that they shall be given a theoretical possibility of answering them. If the sociologist fails in doing so, he has broken off communication with other sociologists. The questions may be as indicated by the following examples: 1) Who is the norm-source of the group and how is the norm-source recruited? 2) How are the social norms put into words? What sanctions are used by the group? 3) How is the group recruited? 4) How are the members of the group socialized? And how is the common symbol environment maintained? 5) What is or what are the ostensible aims of the group? What does the group intend to bring about or realize? Within the framework of such approaches to the problems it may then be meaningful to make classifications and systematize and ask questions of the kind that I have indicated in earlier papers, e.g. what are the instruments and means used in intercommunication, in production, what kind of energy is predominating in production, what is the importance of open and closed groups.

In addition, we might ask questions about the geographical-physical embeddedment of the groups; — but the group-concept and the problems of the group must be the crux of the matter. This even holds true of such an analysis as Josephine Klein has made. She says: "From the vast mass of phenomena which together constitute 'society', we are able to obtain sets of abstractions each of which forms a system and each of which mirrors certain relationships in society. In this chapter we concern ourselves with three such total systems, which we call the value system, the social structure, and the technological system. Between them these systems are exhaustive: evety social phenomenon is capable of analysis in terms of them. The three systems are distinguishable in that they abstract in different ways from society."[46])

I ignore what Klein may mean by saying that these concepts are abstractions from the great mass of phenomena constituting society. If they are abstractions, she can hardly be justified in claiming that the three systems should concurrently be exhaustive in describing society: in that case new phenomena might enable us to abstract a fourth system. But now, in which way do Klein's three systems relate to our group-concept of the social system as we conceive it. The *technological system* apparently corresponds to that which I, in *Education and Society,* have

45) See Utbildning och samhälle, p. 4 et seq.

46) Klein, Josephine, *The Study of Group,* 1956, p. 153 et seq.

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called energy forms and instruments of production and of intercommunication. It is always meaningful to ask for the technological system of a group. It is inconceivable that a group should not have some form of technological system. Klein defines her use of the term social structure in the following manner: "The social structure is composed of persons and groups in interaction; these persons and groups may differ in the extent to which they have access to resources. Therefore we must include the structural implications of decision-making — who can control or influence whom? By what means? In what circumstances? The dimension of power is located here."[47]) This system of Klein's is primarily concerned with the question of the norm-sources and their recruitment. Who, in a group, attain to the norm-source? We may also phrase the question so as to ask about the distance from the norm-source, and then the status-concept comes in. I have discussed that question in *Man in Industrial Society*.[48]) It might furthermore be said that what Klein calls *social structure* touches the formation of groups round reproduction, socialization, and production and their interaction. I have attempted to elucidate that approach to the problems in *Education and Society*. In both these systems Klein presupposes the group-concept.

When we enter into Klein's third system, the *value system*, the question raised by Winch comes up, viz. if the fact that he investigates may be influenced by this preliminary results, is something typical for the social-scientific approach to the problems. It is quite clear, I suppose, that within a group, its members make certain evaluations of the aim of the group, the norm-system, and the norm-sources and their activities. Furthermore, it is to be supposed that the norm-sources assume some attitudes towards the aim, the members of the group, and their own activities, e.g. towards the sanctions prevailing. All these attitudes must influence interaction in the group. The majority of them are socially inherited and therefore taken as self-evident by the members of the group. We adopt them in the process of socialization, i.e. they are acquired and constitute part of our education. If we want to study the value system, and we must do so if we want to understand the activities and the intercommunication within the group, then we must above all localize and analyse the institutions having emotional functions.[49]) What is specific for social sciences, and may create problems both to the sciences and society, is that the theories and data of sociology may influence the object of the investigation and the very actions of the object. The norm-sources may, e.g., adopt another policy based on an analysis of the consequences of their own conduct and on an elucidation of the evaluations producing a certain

47) Ibid., p. 154.

48) Second part, p. 259 et seq.

49) Slutna och öppna arbetsgruppor, p. 15, and Symbolmiljö, mening och attityd, p. 50.

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result. That is why the sociologist always attaches great importance to the study of evaluations. Later on it becomes a problem of practical morals what attitude he is to assume when the result of his studies show a development in society which he ither wants to prevent or to promote.

But the problems concerning symbol environment, meaning, and attitude prove more complicated than that, when we have to make an objective analysis of the behaviour of the group and its members. This difficulty or dilemma may be expressed in the following way:

a. The norms are maintained, pronounced, and sanctioned by the members of the group, and they only become valid by being accepted by the members of the group. The members of the group constitute a prerequisite of the reality of the norms.

b. The norms (including sanctions) build up or form the character of the members of the group, create their personality and way of reacting. (That is why we can speak about e. g. basic personality types). The norms constitute a prerequisite of the reality of the members of the group.

The norms exist through the group-members, the group-members through the norms. It may be expressed like this: the group has the group-members as its properties; these properties have a certain relation to each other, and the properties or qualities depend on the relations between them for their reality. But no reality can be attributed to the relations isolated from the properties. This implicates that in describing a social field we must always consider relations and properties because they determine each other reciprocally. This circumstance creates certain theoretical and practical problems because it is difficult to describe this interpendence with our concepts. First we must examine the relations, then how the properties — the group-members — react because of these relations, and finally how they perceive these relations. Thus, we must alternately choose our starting-point from the relations and from the members, although in both cases we are aware that we are concerned with abstractions. These general difficulties will be depicted schematically in the following figure showing a group composed by five members and aiming at showing the circumstance that the group is a system of communication:

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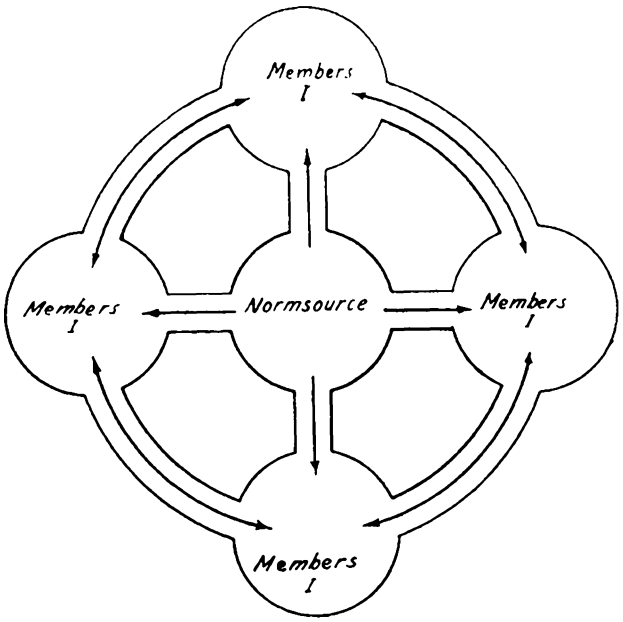

This figure is obviously most schematic, but all the same it may perhaps, to some extent, elucidate the connection between the group-members and that which I have called the relations and their interdependence.

In order to attain to a definition of relation in a certain system of communication we have to make inquiries about the communication lines in physical and social space, about the instruments and vehicles for communication and the realization of the aim of the group, about the souces of energy operating these instruments and vehicles, and finally about the conditions enabling the group-members to perceive the symbols uniformly, i.e. normgoverned and in a regular way. A system of communication may be defined both as a socialization of individuals, i. e. the way words and objects attain a meaning and the ego is built up, and by an indication of the nature of the norm system and the organization of the group[50]). The organization indicated in the figure is the simplest imaginable. If, in addition, we introduce a certain number of group-members situated e. g. outside M^1, we get a status system etc. Thus, the C-field of sociology can be systematized and defined. In this connexion, we must attach the greatest importance to the fact that the operational definitions leading from the C-field to the P-field are never drained off. If we want sociology to be an empirical science, it is necessary that we always keep this transition clearly in mind.

50) Gruppen som kommunikationssystem, 1955.

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